The benefits of an Enrichment Mini Course for millennials in the library's Discovery Centre

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Abstract

Every year, for over three decades, Carleton University in Ottawa, Ontario has participated with other local educational institutions in providing a week-long instruction program that introduces young students to higher education. Highly motivated participants in grades 8 – 11 and numbering over 3,000 attend from several school boards in both eastern Ontario and western Quebec. The Enriched Mini Course Program has become an important recruitment tool for each institution, and at Carleton University, over 50 enriched mini courses are offered including one recent addition by the MacOdrum library staff.

In this article, the author recounts how leading an enriched mini course for millennials in the university library's new Discovery Centre is an innovative initiative that demonstrates the significance of the academic library in the local community, and how staff collaboration helps to develop team building and positive vibes with the millennials.

Keywords

staff collaboration, discovery centre, enrichment course, outreach, millennial generation, Generation Z

Background Information of the Enriched Mini Course Program

Many university students in-the-making live right on our doorstep in local communities of the National capital region, a fact that has not been lost on the organizers of the Enriched Mini Course Program (EMCP) that has been operating at Carleton University since 1981. This one-week program has attracted thousands of junior high school students to our campus every year. Parents are thrilled about having their child selected by area school boards and given the opportunity to experience higher learning at participating area colleges and universities. This program has proven to be a highly successful recruitment tool that offers future undergraduates a first glimpse into academic programs and campus life, not only at Carleton University but other higher learning institutions in our community.

The EMCP, as it has become known, depends mainly on the collaborative effort of full time faculty, graduate students, and university staff who together create unique learning experiences for young minds by planning and teaching one-week mini courses each spring. According to the program director Nestor Querido, the faculties of Science, Engineering and Design, Public Affairs, Business and Social Sciences mini-course offerings include hands-on activities, presentations, computer and creative work and field trips. Although teaching the mini courses requires a lot of preparation, the commitment does not make it any less popular with full-time faculty members and graduate students who find the experience exhilarating.[1] (Querido, 2015)

Since libraries play a key role in the overall research experience on any campus, the idea for library staff to actively engage in offering an EMCP course of its own evolved in part due to past library instruction successes, and because of major library renovations completed during 2012-13 that resulted in the creation of a Discovery Centre.

The Discovery Centre is an innovative learning space designed to engage undergraduates in collaborative and interactive learning. It offers a dynamic environment that is outfitted with ergonomic, accessible furniture, lighting, and state-of-the-art technology. Learning pods are equipped with jacks, electrical outlets, and small screens for projecting from laptops. There are three multipurpose laboratories for gaming, 3D projection and multi-media use, along with MakerBot 3-D printing services, and treadmill study desks.

The library also maintains an emerging technology collection in the centre that includes hardware and peripherals that support student/faculty research. Raspberry Pi boards, DIY gamers kits, electronic gesture control devices, VR viewers and more may be borrowed from the computing services IT help desk. It is this location that inspired the author to propose a library mini course for EMCP millennials (a.k.a. net geners or Generation Z).

Planning for the EMCP course

Planning for the library's EMCP course began in the fall of 2014 when the author replied to a call for courses with 'cool titles' by the EMCP campus office. Motivated by Carleton's undergraduate fascination with the Discovery Centre, our course was aptly named 'Location is everything' since the Centre is a hive of activity each and every day. Moreover, the author's liaison work with the Department of Geography and Environmental Studies provided additional creative impetus.

The first order of business was obtaining a police records check for the team leaders, required 6 weeks in advance of the course because of dealing with a vulnerable age group. This is considered standard practice in Ontario school boards for all teachers.[2]

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[1] From the EMCP internal unpublished report prepared by Nestor Querido, May 2015, for the Office of the Associate Vice-President (Teaching and Learning)

[2] OESC (Ontario Education Services Corporation) Police Record Check Services

Each instructor is also paid an honorarium for teaching an EMCP course by the university, so the author negotiated a cash advance of this money from the library that was used to pay for course supplies, giveaways, prizes, food and drinks.[3]

Following a call-out to library staff for participation, an enthusiastic team of 12 individuals was assembled and got to work planning nine half-day sessions around the central theme of 'location'. Interest in developing this course crossed traditional library silo boundaries, so our team comprised of support staff and professional librarians from several departments, graduate student staff, and a faculty member, who all volunteered their time and expertise.

Figure 1. Members of the library team for the EMCP course

The sessions of the course were planned over a 2 month period beginning with a few brainstorming sessions. Later in the process, the team was asked to provide a learning outcome statement for each half-day session. This helped everyone to stay focused on specific outcomes that were attainable within a 2 or 3 hour time slot, and ensured each session was age-appropriate. Active learning principles and best practices from evidence based library practice informed some of the sessions.[4]

Regular collegial communication benefitted those who were unfamiliar with classroom pedagogical theory. Fortunately, the Education Development Centre on campus offered a Teaching Workshop[5] that covered basic instruction design principles and techniques.

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[3] Honorarium for EMCP instructors is $1000

[4] We informally referred to this study for ideas on how teachers use school libraries when teaching children http://webfiles.rbe.sk.ca/rps/terrance.pon/OELMAReportofFindings.pdf

[5] A Teaching Workshop was prepared by Dr. Morgan Rooney of the Educational Development Centre on campus for the EMCP instructors http://carleton.ca/emcp/forms/

Their teaching tips emphasized strategies for active learning with millennials via such things as brainstorming, think/pair/share, games, concept mapping, fishbowl discussions, jigsaw puzzles, etc.

Figure 2. Discovery Centre located on the 4th floor of MacOdrum Library at Carleton University (with permission)

The Discovery Centre's learning lab became our base camp to explore the theme of location. The benefit of partnering with others demonstrated itself early in the form of imagination. Discovery Centre staff were only too happy to share all their ideas with us so it quickly became apparent this experience would have an enriching effect on us all.

A librarian on the team organized a course web page that described each session in detail so that parents could track their child's activities throughout the week. It also included a map of the student's home schools from across the Ottawa region, and later a Flickr album of photos taken throughout the week was added, in addition to the student's projects.

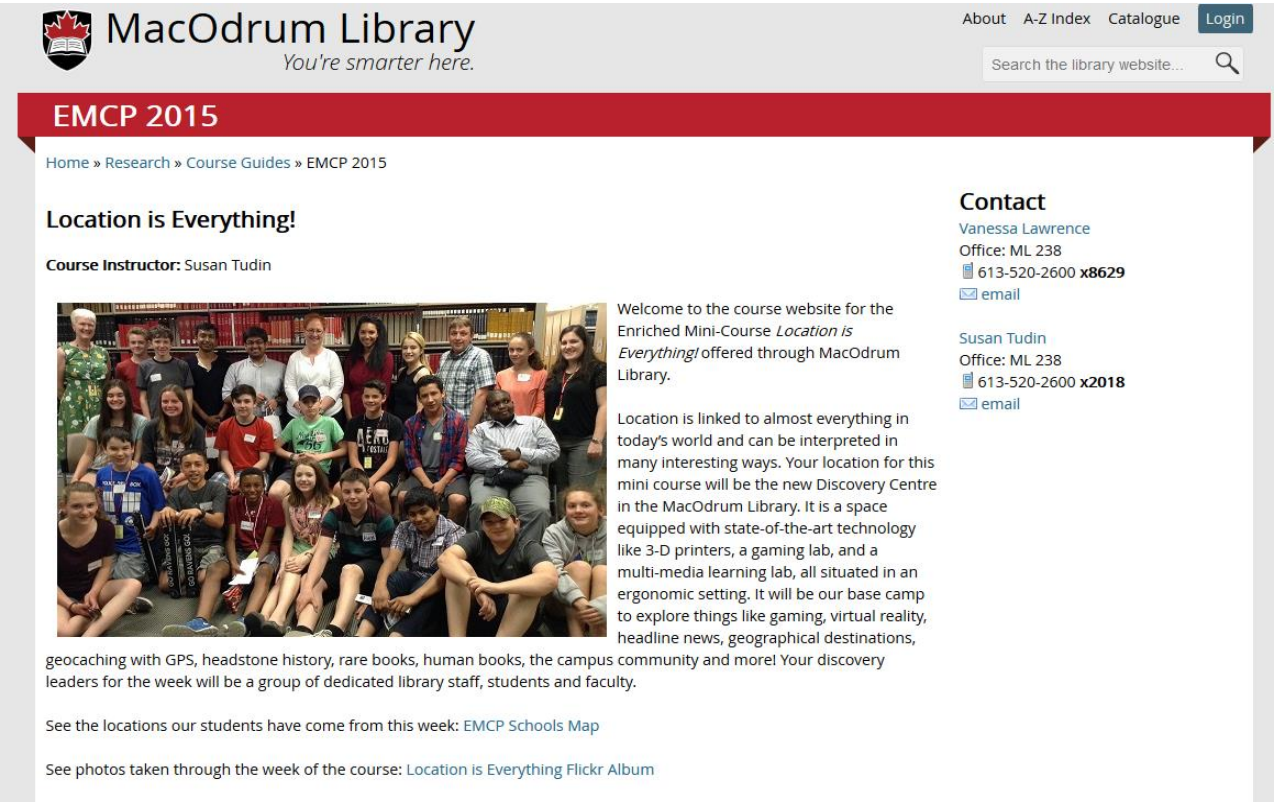

Figure 3. EMCP Course web page.

The team leader and helpers for the course met the students and their parents on EMCP orientation day which was held in the Discovery Centre on the Sunday before the enriched mini course week began. We explained the upcoming activities, distributed a photography consent form, and responded to general questions about the campus and transportation issues. We also took them on a tour of the MacOdrum Library to showcase the many new spaces that had been recently added during renovations.

Millennials in the Discovery Centre

It is no secret that millennials expect much more from their libraries in today's world. Most libraries seem to be in a race to transform themselves and keep up with technology in order to stay relevant. Steven Pryor, Director of Digital Initiatives and Technologies at Southern Illinois University has written about how libraries are providing maker spaces for creative endeavours. Pryor notes that academic libraries are now providing resources for generating new information and research, in addition to the traditional books and journals. For example, just by adding a 3D printing service students are now exposed to an emerging technology that is being adopted in many professional fields including art, engineering, medicine, geographic data visualization, and historical recreation to name a few. (Pryor, 3)

The Discovery Centre at Carleton offers a cross-discipline, collaborative learning environment. This immersive space inspires students to learn and study in a digital environment. Along with the physical location, the Centre also oversees initiatives in

undergraduate research, international experience, experiential and immersive learning and community engagement pedagogy.

In his best-selling book *Grown up Digital*, Don Tapscott brings the reader face to face with the net generation, also known as millennials or Generation Z. He explains that the internet and other digital technologies have had the most significant change on youth over the last 20 years, having grown up digital. (2008, 17) He argues that 'Net Geners' are the smartest generation ever, who think it's cool to be smart. (2008, 30) So, the library team knew from the outset that coming up with an engaging curriculum for them would be a challenge and the Discovery Centre aided and abetted our creative process.

EMCP course: Location is Everything

By definition, geography is linked to almost everything in today's world, and location has never been more important than it is right now. Maybe the biggest way that technology has made our world smaller is through the internet and computer programs like Google Earth which makes it possible to view any location, at any time, across the globe. The team soon discovered that the idea of location could be interpreted in many non-traditional ways as we developed variations on this theme.

On day one, our opening move with the EMCP students began in the multi media lab playing board games to help them understand the merits of gaming in academia. Many board games take players to imaginary locations through maps which helps to form a sense of belonging, and has a bonding effect. The differences between strategic and tactical thinking were experienced through a variety of quick-play competitive and cooperative board games that also offered the players problem solving and team building skills.

Figure 4. Playing board games in the lab.

In the afternoon, the students were introduced to the Discovery Centre as a digital innovation hub that explores the industrial uses of 3D printing, such as the building of prototypes, toys, and the creation of product designs. This session that was led by the Centre's graduate student staff, who later arranged for each EMCP student to print their very own chess piece to take home.

Figure 5. Maker Bot producing chess piece.

On day two, the students moved into the Learning Lab to begin 'Building the future @ LeBreton Flats' with Minecraft, a popular computer game where you build a world with different kinds of 3D blocks. One of our team members is also a library school student who developed this session to guide students with re-imagining the flats, a long-ignored brownfield location in Ottawa's downtown core that is currently under redevelopment by the city.

Educator, Peter Tromba, who is the district technology director of middle schools in Oregon, USA, suggests that video games and simulations are one way to meet student needs and leverage their interest for increased student learning. (2013, 20) He believes that Minecraft is successful because students are already familiar with it, and it can easily be adapted to align with core academic standards and assessment. (2013, 22)

Figure 6. Example of LeBreton Flats re-imagined using Minecraft computer software.

In the afternoon, the students explored different locations in history through the library archives in order to understand something about the place and time these sources were created and accumulated. Their hands-on experience with primary sources included a humorous romp through Carleton's social history, reading articles from the campus newspaper about student antics happening in the 60's and 70's. The students discovered that pranks like streaking were quite popular back then, as was alcohol advertising.

Figure 7. Students learning how to use GPS units.

On day three, after a brief introduction to global positioning systems, the students went out of library to explore the world of geocaching using GPS units with an expert guide from the Geography and Environmental Studies department. The class hiked across campus to various locations where they took readings and explored their surroundings.

This included navigating Carleton's underground tunnel system, viewing the stream gauging station across the Rideau River, visiting the Athletics facilities centre, and the soil and geomorphology labs of the geography department. Uniquely built on a geologic fault line, Carleton University also has a number of 10,000 pound rocks that date back about one billion years that are on view for all to see.[6]

In the afternoon, the students returned to the gaming lab to experience locations in *virtual reality*. During this session, the students learned what virtual reality is and explored how VR goggles work. They compared the experience of building and using their own smartphone DODO case VR cardboard goggles, with using the Discovery Centre's Oculus Rift VR Headsets and Leap Motion gesture controllers. Virtual reality replicates exploration of the physical world and the students rated this session number one overall.

[6] Carleton Now news item http://carletonnow.carleton.ca/september-2013/a-piece-of-ottawas-geological-history-has-home-on-campus/

Figure 8. Building DODO case VR cardboard goggles.

Figure 9. Oculus Rift experience.

On day four, the students researched the question: ‘is history dead’ by learning to use primary and secondary sources, including newspaper and history databases, along with standard Google searches. They were then asked to write creative but plausible

obituaries based on images of actual gravestones using the resources they had learned about and the location and lives lived by their dead subjects.[7]

After lunch, the students created a 'where in the world' poster that poses questions about a mystery place and challenges others to guess the location. This idea was informed by a popular television game show from the 90's called *'Where in the world is Carmen Sandiego?'*

In this session, team members from the Maps, Data and Government information centre taught the students to collect, organize and present information about a geographical site using non-traditional maps, databases and free poster software. The posters were then put on display and provided a great guessing game that literally took them all over the world.[8]

Figure 10. Students doing research for their posters in the Maps, Data and Government Information Centre.

On the final day of the course, the students met with Carleton community members in the Human Library finale. People who work and study at the university engaged the students in lively conversations about their jobs, learning experiences, working environments, goals and aspirations. Our human library folks included a marketing professor, CKCU radio station personality, 3MT (three-minute thesis) winner, sports team member, student library staff member, and student experience coordinator, who

[7] Is History Dead Final Student Projects
[8] Where in the World Student Posters

organizes alternative Spring breaks. Listening to their stories about why Carleton University is a good location to work, study and learn seemed to hit home with this group of millennials who usually spend most of their day connected to the digital world in one form or another.

Benefits of the course

There is no doubt that providing an opportunity to place millennials on a path of discovery was a very rewarding experience for the whole team. In so doing, these students uncovered different aspects of academia, such as finding the library to be an interesting locale to explore and learn outside of the classroom. They also benefited from peer participation in an academic learning environment and interacted with experts concerning new technologies for which they have had little or no exposure.

Although the hands-on experiences of this course were the most challenging, they were reported to be the most fun. John Palfrey of Harvard's Berkman Center for Internet and Society reminds us that "millennial students blend their in-person interactions and their virtual interactions in a way that is uncommon for individuals from older generations" (Palfrey, 2008). The team observed this first hand and believes that our EMCP course was likely a transformative experience for many of them.

In almost all cases, the students did not know each other since they came from different school boards. Therefore, it was particularly interesting to observe their interactions with one student who spent his breaks programming on his Raspberry-Pi. Like bees to honey even the quietest students were interested in computing and were overheard talking about using Python to program for robotics!

Community engagement with the parents benefitted the library by raising awareness and showing them what a full-service 21st century academic library looks like. Establishing relationships with young students by finding common ground in the library will likely improve their higher learning outcomes and help them transition from high school to university with greater ease in the years ahead.

Being involved in the development and delivery of this EMCP course was a major collaborative and team building exercise that was good for staff morale in the library. It attracted those who wanted to work with others outside of their traditional silos and job duties. This provided the opportunity to get creative in non-traditional ways, resulting in very satisfying experiences.

The team was also exposed to some of the guiding principles of teaching pedagogies and outcomes-based learning. They not only demonstrated integrity in their relationships but a strong commitment to creative outreach that promotes lifelong learning. Partnering and problem-solving with non-library staff throughout the week also proved to be helpful and beneficial.

Overall, the staff reported delivering this enriched mini course to be an eye-opening experience by observing just how tuned in and turned on millennials are when working with anything electronic. It was noted that compared to our current undergraduates, who often struggle with database research concepts, these younger students had no trouble at all with absorbing what we were teaching them through serious systematic thinking.

Concluding Remarks

The library's EMCP course was a successful and collaborative exercise in the delivery of a mini course to prospective students. To effectively present this course, the library's team partnered with many other university staff and used our newest learning space, the Discovery Centre, to welcome and engage budding university students.

Results of the informal EMCP student evaluations indicate that the opportunity to experience the university environment and study topics not offered at their home schools was important or very important to the students. Although the course description could have been more clearly defined, the lectures for each session were rated above average and the overall experience was either above average or excellent.

Through the library's EMCP student survey, we found the students rated most of the sessions of the course as either highly interesting or very interesting. The sessions with the highest rating were 3-D printing, Virtual Reality/Oculus Rift and Building LeBreton Flats with Minecraft. Only 25% of the students indicated that they had selected our course as their first choice, but over 80% now think differently about academic libraries than before they started this course.

For the staff, among the lessons learned is always expect the unexpected. No one predicted that the average room temperature in the Discovery Centre would be 33 degrees during the first week of May in 2015. This was due to the lack of air conditioning which had not been turned on because of ongoing HVAC construction work. The students did not complain and although we gave them many opportunities to take outdoor breaks, they preferred to be in the Discovery Centre for most of the time. It was fortuitous that we had the forethought to supply them with plenty of drinks and snacks. We also realize that an ice breaker activity at the beginning of the week could have been planned to allow them to get to know one another better at the outset.

Innovation through team work, creative thinking and risk-taking is how this enriched mini course should be characterized. Most people are familiar with the African proverb that 'it takes a village to raise a child' but in this case, everyone who was involved in this course would probably agree that sometimes it takes a library to make a difference with young minds who may someday become the leading thinkers of tomorrow. We learned that collegial partnerships are the cornerstone of outreach and through this course for millennials, helped develop positive vibes with them.

Figure 11. Susan Tudin (author) with the EMCP students from the 2015 class.

References

Querido, N. (2015). EMCP report. Unpublished. Prepared for the Office of the Associate Vice-President (Teaching and Learning), Ottawa, ON: Carleton University.

Pryor, S. (2014). Implementing a 3D Printing Service in an Academic Library. *Journal of Library Administration, 54,* 1-10.

Tapscott, D. (2009). Grown Up Digital. New York, NY: McGraw-Hill.

Tromba, P. (2013). Build Engagement and Knowledge One Block at a Time with Minecraft, *Learning and Leading with Technology,* June/July, 20-23.

Palfrey, J. (2008). Born Digital: understanding the first generation of digital natives. New York, NY: Basic Books.